

HÖRLIN et al

Serial No. 10/629,774

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Atty Dkt: 2380-788

Art Unit: 2663

REMARKS/ARGUMENTS

Claims 41 and 42 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent 5,526,344 to Diaz et al. Claim 43 stands rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 5,526,344 to Diaz et al in view of U.S. Patent 6,011,793 to Smith. All prior art rejections are respectfully traversed for at least the following reasons.

U.S. Patent 5,526,344 to Diaz et al. does not teach or suggest a switch core of the type required by Applicants' claims. Applicants' specification teaches (e.g., on page 27, lines 10 – 12) what is meant by a switch core: "The switch core 24 comprises rows for incoming data and columns for outgoing data. In the crosspoints between rows and columns there are small buffers..." Applicants' Fig. 7 illustrates the crosspoints between rows and columns.

Diaz' switch 10 is really just a pair of slotted buses 12 and 21 (*see*, e.g., col. 4, lines 51+), and thus is not a switch core. And not being a switch core, neither does Diaz' bus switch 10 have the claimed crosspoints.

Applicants' further require in independent claim 41 that there be one buffer memory per crosspoint to which cells having differing priority classes are written. This limitation expresses the fact that cells having differing priority classes travel through the same path (i.e., the same buffer memory per crosspoint).

In support of the prior art rejection, the Office Action cites col. 23, lines 35 – 46) of Diaz. The Diaz cited structure concerns packet bus overlay entities 155 managing buffers that make the ingress block and egress block queuing systems 156 (see Diaz Fig. 6e). As apparent from Fig. 6e and col. 23, Diaz' has plural queues, i.e., subqueues, so that datagrams have alternative paths through which they can travel.

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In essence, the remarks of the Office Action, and Diaz itself, concern handling of backpressure and discard procedures in order to master conditions of traffic congestion for the entire traffic node. Diaz is preoccupied with the transfer of traffic between an ingress buffer system and an egress buffer system. The traffic properties that the examiner refer to is a concern of those buffer systems, not to buffer matrix (i.e., a switch core with crosspoints).

In order to transfer traffic between the mentioned ingress and egress buffer systems, Applicants use a small buffer matrix. Due to the fact that this matrix has the size of the square of the number of switch ports, Applicants manage to use only one matrix that has a buffer capacity for only one cell per $x \rightarrow y$ path. This situation establishes a switching apparatus with a single buffer matrix handling multiple flows with different priorities per $x \rightarrow y$ path. The egress side is for every y port served according to the priority for the $x_1, x_2, \dots, x_n \rightarrow y$ paths. When an $x \rightarrow y$ path on the ingress side is connected to a flow with high priority, there is a possibility, that the previous low priority flow is not yet completely served from the egress side.

Applicants have a management signalling procedure that informs the buffer matrix that the cell from the low priority flow must be treated as if it is a high priority cell because the $x \rightarrow y$ path is now dedicated to a high priority flow. No traffic is discarded and the potential congestion is on a sub node level, but still important as the claimed procedures does not degrade the cell delay variation characteristics of the high priority traffic while utilizing a minimum sized buffer matrix to transfer the traffic between the ingress buffer system and the egress buffer system. A congestion or not of the entire node does not change the properties of cell transfers over the buffer matrix.

In view of the foregoing, Applicants respectfully submit that the prior art rejections should be withdrawn.

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In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.


The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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